UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,374	07/06/2001	Krishnan Kumaran	15-11	4294

7590 08/10/2005	EXAMINER
Docket Administrator (Rm. 3J-219)	DANIEL JR, WILLIE J
Lucent Technologies Inc.	

ART UNIT	PAPER NUMBER
2686	

101 Crawfords Corner Road
Holmdel, NJ 07733

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO 90C (Rev 10/03)

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>07 June 2005</u>.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-14,24 and 26-28</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1-14,24 and 26-28</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All   b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____.

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. This action is in response to applicant's RCE amendment filed on 07 June 2005. **Claims 1-**

14, **24**, and **26-28** are now pending in the present application.

Continued Examination Under 37 CFR 1.114

2.   A request for continued examination under 37 CFR 1.114, including the fee set forth

in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is

eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR

1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn

pursuant to 37 CFR 1.114. Applicant's submission filed on 07 June 2005 has been entered.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the
> subject matter which the applicant regards as his invention.

Claims 1, **6**, and **27** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

          Regarding **Claim 1**, the claim recites the limitation "...ones of the lists..." in lines 5

and 10 of the claim in which the use of the term "...**ones**..." is not clear. The Examiner

suggests, for example, "...one of the plurality of lists...".

          Regarding **Claim 1**, the claim recites the limitation "...associated **ones** of the base

stations..." in line 6 of the claim in which the use of the term "...**ones**..." is not clear. The

specification provides support for associated base stations or angular sectors (see pg. 5, lines 3-6).

Regarding **Claim 6**, the claim recites the limitation"...individual **ones** of the quantities..." in line 3 of the claim in which the use of the term "...**ones**..." is not clear.

Regarding **Claim 6**, the claim recites the limitation"...associated **ones** of the frequency channels..." in line 3 of the claim in which the use of the term "...**ones**..." is not clear.

Regarding **Claim 27**, the claim recites the limitation "...store ones of the produced lists..." in line 3 of the claim. The Examiner suggests, for example, "...store one of the produced list of the frequency channel rankings..." or "...store the produced lists of the frequency channel rankings ...". The specification provides support for lists being stored at the base stations (see pg. 5, line 30 - pg. 6, line 4).

Regarding **Claims 1**, **6**, and **27**, the Examiner requests the applicant to clarify the claim language and provide specific claim language as supported by the specification as well as indicate page(s), line(s), and drawing(s) to support any amendment(s).

4. This list of examples is not intended to be exhaustive. The Examiner respectfully requests the applicant to review all claims and clarify the issues as listed above as well as any other issue(s) that are not listed.

Claim Objections

5. **Claims 1** and **24** are objected to because of the following informalities:

a. **Claim 1** recites the limitation "...the lists..." in line(s) 4 and 8 of the claim. There is insufficient antecedent basis for this limitation in the claim and the claim is being considered as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner suggests, for example, "...the plurality of lists of channel rankings..." as stated in line(s) 3-4 of the claim. Also, the Examiner requests the applicant to be consistent and use the exact terminology as applicable. As a result of the suggestion, the term "...produced..." has been omitted to relate to the claim language as recited in lines 3-4 (see and correct similar claims).

b. **Claim 1** recites the limitation "...**the** base stations..." in line(s) 6-7 of the claim. There is insufficient antecedent basis for this limitation in the claim and the claim is being considered as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

c. **Claim 24** recites the limitation "...lists of channel rankings..." in line(s) 9 of the claim. There is insufficient antecedent basis for this limitation in the claim and the claim is being considered as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The Examiner interprets as "...lists of frequency channel rankings..." as stated in line(s) 4 of the claim. Also, the Examiner requests the applicant to be consistent and use the exact terminology as applicable.

Regarding **Claims 1** and **24**, the Examiner requests the applicant to clarify the claim

language and provide specific claim language as supported by the specification as well as

indicate page(s), line(s), and drawing(s) to support any amendment(s).

Appropriate correction is required.

6. This list of examples is not intended to be exhaustive. The Examiner respectfully requests

the applicant to review all claims and clarify the issues as listed above as well as any other

issue(s) that are not listed.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

Claims 1-4, 24, 26, and **28** are rejected under 35 U.S.C. 103(a) as being unpatentable over

Borst et al. (hereinafter Borst), Bell Labs Technical Journal, "Wireless Simulation and Self-

Organizing Spectrum Management", Vol. 2, No. 3, 1997, pp. 81-98 in view of **Jiang et al.**

(hereinafter Jiang) **(US 6,535,742 B1)**.

Regarding **Claim 1**, Borst discloses a process for assigning frequency channels to

communications in a cellular wireless system, comprising:

performing a simulation of the system to produce a plurality of lists of channel rankings,

the simulation evolving the lists according to an algorithm that dynamically reduces inter-

communication interference, ones of the lists of channel rankings prioritizing the channels to

service communications by associated ones of the base stations (see pg. 82, right col., lines 18-25; pg. 83, right col., lines 5-16; pg. 84, right col., lines 22-31), where the algorithm of the simulation tool organizes a lists of channels according to interference measurements for the base stations of the network in which as the network changes, the algorithm adjusts the system to dynamically adapts to the changes in the system; and

associated base stations that are configured to assign channels to service communications with mobile units based on the channel ranking in the associated ones of the lists (see pg. 82, right col., lines 18-36; pg. 83, right col., lines 5-16; pg. 84, right col., lines 22-31; pg. 90, right col., lines 18-26), where the system utilizes a simulation tool in which a list of channels are used by the base stations that allocate the channel assignment to mobile stations operating in a sector of a base station. Borst fails to disclose having the feature sending the lists of produced channel rankings to associated base stations. However, the examiner maintains that the feature sending the lists of produced channel rankings to associated base stations was well known in the art, as taught by Jiang.

In the same field of endeavor, Jiang discloses the feature sending the lists of produced channel rankings to associated base stations (10) (see col. 4, line 65 - col. 5, line 1; col. 6, lines 52-56; Figs. 1 and 2 "ref. 230"), where the MSC (60) allocates (e.g., sends) a ranking list of channels to the base station (10) of cell (20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Borst and Jiang to have the feature sending the lists of produced channel rankings to associated base stations, in order to have

channel allocation scheme that utilizes a centralized channel allocation while scanning

channels for the optimum channel assignment, as taught by Jiang (see col. 3, lines 7-11).

Regarding **Claim 2**, the combination of Borst and Jiang discloses every limitation

claimed, as applied above (see claim 1), in addition Borst further discloses the process of

claim 1, wherein the evolving is constrained to produce less than a preselected amount of call

blocking and/or call dropping (see pg. 87, left col., line 34 - right col., line 5; pg. 90, left col.,

lines 41-44; pg. 94, left col., line 30 - right col., line 1; pg. 95, left col., lines 1-3,7-10; Figs.7-

8), where the simulation tool monitors the blocking of calls for a maximum amount of times

and dropping of calls according to the threshold along with interference.

Regarding **Claim 3**, the combination of Borst and Jiang discloses every limitation

claimed, as applied above (see claim 1), in addition Borst further discloses the process of

claim 1, wherein one of the produced lists of channel rankings separately ranks the channels

for separate angular sectors of the associated base station (see pg. 83, lines 5-16; pg. 84, right

col., lines 22-31; Fig. 1), where the system organizes the channels on a per sector basis by

considering the neighbor station for improving network performance.

Regarding **Claim 4**, the combination of Borst and Jiang discloses every limitation

claimed, as applied above (see claim 3), in addition Borst further discloses the process of

claim 3, wherein the performing includes producing a list that serially ranks the channels for

usage in servicing wireless communications (see pg. 84, right col., lines 22-31), where the

channels are ranked in order of interference measurements.

Regarding **Claim 24**, Borst discloses a channel allocation system for ranking

frequency channels for usage by base stations of a cellular wireless system, comprising:

a processor (e.g., system computer, MSC, BSC) configured to dynamically simulate the

cellular wireless system according to an algorithm that dynamically produces lists of

frequency channel rankings for individual base stations in a manner that reduces inter-call

interference (see pg. 82, right col., lines 18-36,40-43; pg. 83, right col., lines 5-16; pg. 84,

right col., lines 22-31; pg. 90, right col.; Fig. 3), where the algorithm of the simulation tool

organizes lists of channels according to interference measurements for the base stations of

the network in which the processor would be inherent to run the program; and

the processor configured to use the input data to determine a starting state for the

dynamical simulation (see pg. 82, right col., lines 18-36,40-43; pg. 83, right col., lines 5-16;

pg. 84, left col., line 84 - right col., line 31; pg. 90, right col., lines 18-26; Figs. 1-3, 5, and 6),

where the computer uses a simulation tool to dynamically allocate channel lists in which the

base stations use for communicating with mobile units of each sector. The simulation tool

monitors the current status of information provided by the base stations for quantifying the

global network. Borst fails to disclose having the feature a link coupling the processor to the

base stations, the link supporting transmissions of input data on the cellular wireless system

to the processor and transmissions of the produced lists of channel rankings to the base

stations. However, the examiner maintains that the feature a link coupling the processor to

the base stations, the link supporting transmissions of input data on the cellular wireless

system to the processor and transmissions of the produced lists of channel rankings to the

base stations was well known in the art, as taught by Jiang.

Jiang further discloses the feature a link coupling the MSC (60) which reads on the

claimed "processor" to the base stations (10), the link supporting transmissions of input data

on the wireless communication system which reads on the claimed "cellular wireless system"
to the processor (60) and transmissions of the produced lists of channel rankings to the base
stations (10) (see col. 3, lines 54-57; col. 4, line 65 - col. 5, line 1; col. 6, lines 52-56; Figs. 1
and 2 "ref. 230"), where the MSC (60) allocates (e.g., sends) a ranking list of channels to the
base station (10) of cell (20) in which the MSC (60) communicates with the base station (10)
the link shown in Fig. 1.

Therefore, it would have been obvious to one of ordinary skill in the art at the time
the invention was made to combine the teachings of Borst and Jiang to have the feature a link
coupling the processor to the base stations, the link supporting transmissions of input data on
the cellular wireless system to the processor and transmissions of the produced lists of
channel rankings to the base stations, in order to have channel allocation scheme that utilizes
a centralized channel allocation while scanning channels for the optimum channel
assignment, as taught by Jiang (see col. 3, lines 7-11).

Regarding **Claim 26**, the combination of Borst and Jiang discloses every limitation
claimed, as applied above (see claim 24), in addition Borst further discloses the allocation
system of claim 24, wherein the processor is configured to produce separate lists that rank the
frequency channels for use in separate angular sectors of at least one of the base stations in
assigning channels to support communications (see pg. 83, lines 5-16; pg. 84, right col., lines
22-31; Figs. 1 and 3), where the simulation tool of the network organizes the channels on a
per sector basis by considering the neighbor station for improving network performance.

Regarding **Claim 28**, the combination of Borst and Jiang discloses every limitation
claimed, as applied above (see claim 26), in addition Borst further discloses the allocation

system of claim 26, wherein the processor is configured to perform the dynamical simulation based on an event queue containing events for simulating processing of communications with mobile units (see pg. 82, right col., lines 33-36,40-43; pg. 84, left col., line 17 - right col., line 10; pg. 85, right col., lines 19-23,28-40; pg. 87, left col., lines 5-32, right col., lines 16-20; pg. 90, left col., lines 41-45, right col., lines 1-31; pg. 91, right col., lines 4-10; Figs. 1, 3, 5, and 6), where the simulation tool uses parameters to monitor the system while collecting event statistics of the mobile units and base stations located within the network.

Claims 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Borst et al.** (hereinafter Borst), Bell Labs Technical Journal, "Wireless Simulation and Self-Organizing Spectrum Management", Vol. 2, No. 3, 1997, pp. 81-98 in view of **Jiang et al.** (hereinafter Jiang) (**US 6,535,742 B1**) as applied to claim 4 above, and further in view of **Jensen (US 6,496,698 B2)**.

Regarding **Claim 5**, the combination of Borst and Jiang teaches of identifying the produced lists of channel rankings (see pg. 84, right col., lines 22-31), where the lists of channels are ranked according to interference. Borst fails to disclose having the feature converging to a fixed point for evolution of the lists of channel rankings. However, the examiner maintains that the feature converging to a fixed point for evolution of the lists of channel rankings was well known in the art, as taught by Jensen.

In the same field of endeavor, Jensen teaches the feature converging to a particular point which reads on the claimed "fixed point" for evolution of the lists of frequency groups which reads on the claimed "channel" rankings (see col. 6, lines 11-47; col. 13, line 47 - col.

14, line 30; Figs. 3-5), where the software iterates through changes for optimization of the cell, sector, and system to find the best change to be made for reaching a particular point.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Borst, Jiang, and Jensen to have the feature converging to a fixed point for evolution of the lists of channel rankings, in order to provide a process by which the quality of service provided by a cellular system may be determined in terms of fixed verifiable quantities so that changes may be made to enhance the quality of service, as taught by Jensen (see col. 5, lines 1-7).

Regarding **Claim 6**, the combination of Borst, Jiang, and Jensen discloses every limitation claimed, as applied above (see claim 5), in addition Borst further discloses the process of claim 5, wherein the performing comprises:

determining quantities that characterize communications serviced by one of the angular sectors, individual ones of the quantities being indicative of potential inter-call interference for calls serviced by associated ones of the frequency channels (see pg. 83, right. col., lines 5-14; pg. 90, left col., lines 41-45, right col., lines 1-31; pg. 91, right col., lines 4-10; pg. 94, right col., lines 13-19; Figs. 3 and 5), where the simulation tool of the system monitors events to minimize interference between channels of the list; and

re-ranking the list of frequency channels associated with the one of the angular sectors based on the determined quantities (see pg. 83, right col., lines 5-14; pg. 84, left col., line 17 - right col., line 10; pg. 84, right col., lines 22-30; pg. 85, right col., line 43-45; pg. 86, right col., line 4 - pg. 87, left col., line 8; pg. 87, right col., lines 41-43; pg. 90, left col., lines 41-45, right col., lines 1-31; pg. 91, right col., lines 4-10; pg. 94, right col., lines 13-19; Figs. 3

and 5), where the simulation monitors changes in the system for ranking channels based on

events in which the re-ranking would be inherent as the system changes due to the events

monitored.

Regarding **Claim 7**, the combination of Borst, Jiang, and Jensen discloses every

limitation claimed, as applied above (see claim 5), in addition Borst further discloses the

process of claim 5, wherein the performing comprises:

providing a propagation which reads on the claimed "fading matrix" for the system (see

pg. 87, right col., lines 7-24,39-43; pg. 88, left col., lines 22-27, 33 - right col. line 40; Fig.

4); and

wherein the performing includes assigning new calls to base stations based in part on the

fading matrix (see pg. 84, right col., lines 12-19,41-43; pg. 85, right col., lines 16-23; pg. 87,

right col., lines 7-24,39-43; pg. 88, left col., lines 22-27, 33 - right col. line 40; Figs. 3 and 4),

where the simulation takes into account fading for assigning channels to new call.

Regarding **Claim 8**, the combination of Borst, Jiang, and Jensen discloses every

limitation claimed, as applied above (see claim 5), in addition Borst further discloses the

process of claim 5, further comprising:

providing input data on locations of base stations and distributions of mobile units (see

pg. 84, left col., line 17 - right col., line 10; pg. 85, right col., lines 19-23,28-40; pg. 87, left

col., lines 5-32, right col., lines 16-20; pg. 90, left col., lines 41-45, right col., lines 1-31; pg.

91, right col., lines 4-10; Figs. 1, 3, 5, and 6), where the simulation tool uses parameters to

monitor the system while collecting event statistics of the mobile units and base stations

location within the network; and

wherein the performing is based in part on the provided input data (see pg. 84, left col., line 17 - right col., line 10; pg. 85, right col., lines 19-23,28-40; pg. 87, left col., lines 5-32, right col., lines 16-20; pg. 90, left col., lines 41-45, right col., lines 1-31; pg. 91, right col., lines 4-10; Figs. 1, 3, 5, and 6).

Regarding **Claim 9**, the combination of Borst, Jiang, and Jensen discloses every limitation claimed, as applied above (see claim 5), in addition Borst further discloses the process of claim 5, wherein the performing includes simulating a retrialing mode which reads on the claimed "redialing" of blocked calls (see pg. 87, left col., line 34 - right col., line 5; Fig. 3), where the simulation tool has a retrialing mode that simulates the redialing of blocked calls.

Regarding **Claim 10**, the combination of Borst, Jiang, and Jensen discloses every limitation claimed, as applied above (see claim 5), in addition Borst further discloses the process of claim 5, wherein the performing includes simulating maintenance processing of calls based on associated power levels (see pg. 85, left col., lines 1-6,21-23; pg. 89, left col., line 11 - right col., line 9; Fig. 3), where the simulation monitors the interference in correlation to the power level.

Regarding **Claim 11**, the combination of Borst, Jiang, and Jensen discloses every limitation claimed, as applied above (see claim 5), in addition Borst further discloses the process of claim 5, wherein the performing includes assigning new calls according to a time division-multiplexing scheme (see pg. 83, right col., lines 5-16; pg. 84, right col., lines 12-30; Fig. 2).

Regarding **Claim 12**, Borst discloses the process of claim 5, further comprising:

servicing new calls in the base stations based on priorities derived from the lists of channel rankings (see pg. 84, right col., lines 12-30; pg. 82, right col., lines 18-36; pg. 83, right col., lines 5-16), where the calls of the system are assigned to channels of the list according to the interference measurements. Borst fails to disclose having the feature sent lists of channel rankings. However, the examiner maintains that the feature sent lists was well known in the art, as taught by Jiang.

The combination of Jiang and Jensen as applied in claim 5, Jiang further discloses the feature sent lists of channel rankings (see col. 3, lines 54-57; col. 4, line 65 - col. 5, line 1; col. 6, lines 52-56; Figs. 1 and 2 "ref. 230"), where the MSC (60) allocates (e.g., sends) a ranking list of channels to the base station (10) of cell (20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Borst, Jiang, and Jensen to have the feature sent lists of channel rankings, in order to have channel allocation scheme that utilizes a centralized channel allocation while scanning channels for the optimum channel assignment, as taught by Jiang (see col. 3, lines 7-11).

Regarding **Claim 13**, the combination of Borst, Jiang, and Jensen discloses every limitation claimed, as applied above (see claim 5), in addition Borst further discloses the process of claim 5, wherein the algorithm lowers interference based solely on uplink communications (see pg. 84, right col., lines 22-27; pg. 85, left col., lines 1-38; pg. 86, left col., line 7 - right col., line 2; pg. 94, right col., lines 8-11), where the algorithm for the simulation tool uses the uplink measurements for assigning the channels on the list to lower interference.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Borst et al.**

(hereinafter Borst), <u>Bell Labs Technical Journal</u>, "Wireless Simulation and Self-Organizing

Spectrum Management", Vol. 2, No. 3, 1997, pp. 81-98, **Jiang et al.** (hereinafter Jiang) **(US**

6,535,742 B1), and **Jensen (US 6,496,698 B2)** as applied to claim 5 above, and further in

view of **Anderson et al.** (hereinafter Anderson) **(EP 0817521 A2)**.

Regarding **Claim 14**, the combination of Borst, Jiang, and Jensen discloses every

limitation claimed, as applied above (see claim 5), in addition Borst further of the algorithm

monitoring the interference of the downlink (see pg. 84, right col., lines 22-27; pg. 85, left

col., lines 1-38; pg. 86, right col., lines 1-2; pg. 95, left col., lines 15-18), where the algorithm

monitors the downlink quality with the current simulation tool. The combination of Borst,

Jiang, and Jensen fails to disclose the feature lowering the interference based on the

downlink. However, the examiner maintains that the feature lowering the interference based

on the downlink was well known in the art, as taught by Anderson.

In the same field of endeavor, Anderson teaches the feature lowering the interference

based on the downlink (see pg. 3, lines 20-40,44-50; pg. 4, lines 12-20,29-32; pg. 5, lines 6-

9,13-55; Claims 20-21; Fig. 2), where the channels are prioritized in list according to the

downlink.

Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine the teachings of Borst, Jiang, Jensen, and Anderson to

have the feature lowering the interference based on the downlink, in order to have dynamic

channel assignment for wireless networks, full automation, easy system growth and higher,

as taught by Anderson (see pg. 2, lines 39-40).

Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Borst et al.**

(hereinafter Borst), <u>Bell Labs Technical Journal</u>, "Wireless Simulation and Self-Organizing

Spectrum Management", Vol. 2, No. 3, 1997, pp. 81-98 in view of **Jiang et al.** (hereinafter

Jiang) **(US 6,535,742 B1)** as applied to claim 24 above, and further in view of **Greene, Sr. et**

al. (hereinafter Greene) **(US 5,926,763)**.

Regarding **Claim 27**, Borst teaches of having a plurality of base stations (see pg. 83,

right col., lines 5-14; pg. 84, right col., lines 17-31; pg. 90, right col. lines 18-26; Figs. 1-3),

where the base stations uses the list to allocate channels to mobile unit in the sectors. Borst

fails to disclose having the feature each base station having a data storage device configured

to store ones of the produced lists received from the processor. However, the examiner

maintains that the feature ones of the produced lists received from the processor was well

known in the art, as taught by Jiang.

Jiang further discloses the feature ones of the produced lists received from the

processor (60) (see col. 3, lines 54-57; col. 4, line 65 - col. 5, line 1; col. 6, lines 52-56; Figs.

1 and 2 "ref. 230"), where the MSC (60) allocates (e.g., sends) a ranking list of channels to

the base station (10) of cell (20).

Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine the teachings of Borst and Jiang to have the feature ones

of the produced lists received from the processor, in order to have channel allocation scheme

that utilizes a centralized channel allocation while scanning channels for the optimum

channel assignment, as taught by Jiang (see col. 3, lines 7-11). The combination of Borst and

Jiang fails to disclose having the feature each base station has a data storage device

configured to store. However, the examiner maintains that the feature each base station has a

data storage device configured to store was well known in the art, as taught by Greene.

In the same field of endeavor, Greene teaches the feature that each land station (12)

which reads on the claimed "base station" has a memory (50) which reads on the claimed

"data storage device" configured to store (see col. 7, lines 15-17,31-44; Figs. 3-7), where the

memory stores a list of channels in a table for the base station.

Therefore, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to combine the teachings of Borst, Jiang, and Greene to have the

feature each base station to have a data storage device configured to store, in order to have a

cellular communication system in which voice channels usage is biased to rank potentially

higher quality channels over potentially lower quality channels, as taught by Greene (see col.

2, lines 65-67; col. 10, lines 25-31).

Response to Arguments

8.   Applicant's arguments with respect to **claims 1-14, 24**, and **26-28** have been

considered but are moot in view of the new ground(s) of rejection.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

   a. Wang discloses "Method and Apparatus For Dynamic Channel Allocation".

10.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Willie J. Daniel, Jr. whose telephone number is (571) 272-

7907. The examiner can normally be reached on 7:30-4:30.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Marsha D. Banks-Harold can be reached on (571) 272-7905. The fax phone

number for the organization where this application or proceeding is assigned is 703-872-

9306.

   Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published

applications may be obtained from either Private PAIR or Public PAIR. Status information

for unpublished applications is available through Private PAIR only. For more information

about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access

to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197

(toll-free).

WJD,JR
08 August 2005

Marsha O Banks-Harold
MARSHA D. BANKS-HAROLD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600